

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 to 10 (Cancelled).

11. (Currently Amended) A device for processing cell suspensions for autotransfusion comprising at least one separation unit for separating cells by centrifugation, the separation unit comprising a suspension inlet line and a concentrated cell outlet line having a concentrated cell outlet pump under the control of a controller and a waste line each located downstream of the suspension inlet line, the concentrated cell outlet line being connected to a diluting device, the diluting ~~dilution~~ device being in fluid connection with the concentrated cell outlet line via a solution line for delivering physiologic solution, wherein the solution line is connected to the concentrated cell outlet line upstream of the concentrated cell outlet pump, wherein cells contained in a suspension entering the separation unit through the inlet line under the control of the controller are concentrated in the separation unit, removed through the concentrated cell outlet line, and diluted via the diluting device with a physiologic solution.

12. (Previously Presented) The device of claim 11, wherein the remainder of the suspension separated from the cells is removed from the separation unit through the waste line.

13. (Previously Presented) The device of claim 11, wherein the solution line has a solution pump for controlling the flow of physiologic solution.

14. (Previously Presented) A device for processing cell suspensions for autotransfusion comprising at least one separation unit for separating cells by centrifugation, the separation unit comprising a suspension inlet line and a concentrated cell outlet line and a waste line each located downstream of the suspension inlet line, the concentrated cell outlet line being connected to a diluting device, the dilution device being in fluid connection with the concentrated cell outlet

line via a solution line for delivering physiologic solution, wherein cells contained in a suspension entering the separation unit through the inlet line are concentrated in the separation unit, removed through the concentrated cell outlet line, and diluted via the diluting device with a physiologic solution, wherein the solution line has a solution pump for controlling the flow of physiologic solution and wherein the concentrated cell outlet line has a concentrated cell pump for controlling the flow of concentrated cells from the separation unit, the solution line being connected to the concentrated cell outlet line upstream of the concentrated cell pump.

15. (Original) The device of claim 14, further comprising control means, connected to the concentrated cell pump and solution pump, for controlling the flow of concentrated cells and physiologic solution.

16. (Previously Presented) The device of claim 15, wherein the control means controls a rate of delivery of at least one of the concentrated cell pump and the solution pump so as to concentrate red blood cells to a hematocrit of 60 to 98 percent.

17. (Previously Presented) The device of claim 15, wherein the control means controls a rate of delivery of at least one of the concentrated cell pump and the solution pump so as to concentrate red blood cells to a hematocrit of 85 percent.

18. (Original) The device of claim 15, wherein the control means controls the concentration of the diluted cells.

19. (Previously Presented) The device of claim 11, wherein the separation unit has a shape selected from the group consisting of a ring and a spiral.

20. (Original) The device of claim 11, wherein the separation unit further comprises a channel located between the suspension inlet and the concentrated cell outlet.

21. (Previously Presented) The device of claim 11, wherein the device processes cell suspensions collected intraoperatively.

22. (Previously Presented) The device of claim 11, wherein the device processes cell suspensions collected post-operatively.

23. (Previously Presented) A device for processing a suspension containing red blood cells for autotransfusion comprising at least one separation unit for concentrating red blood cells by centrifugation, the separation unit comprising a suspension inlet connected to a suspension inlet line having a suspension pump, a red blood cell outlet connected to a red blood cell outlet line having a red blood cell pump, and a waste outlet connected to a waste outlet line;

a dilution device comprising a physiologic solution tank and a solution line having a solution pump, the solution line providing fluid connection between the physiologic solution tank and the red blood cell outlet line, the connection between the solution line and the red blood cell outlet line being upstream of the red blood cell pump; and

a control unit connected to the red blood cell pump and solution pump, wherein the control unit controls the flow and mixing rate of concentrated red blood cells and physiologic solution;

wherein red blood cells contained in a suspension entering the separation unit through the suspension inlet are concentrated in an annular channel of the separation unit, removed through the red blood cell outlet line, and diluted with physiologic solution.

24. (Original) The device of claim 23, wherein the remainder of the suspension is removed through the waste line.

25. (Previously Presented) The device of claim 23, wherein the control unit controls a rate of delivery of at least one of the red blood cell pump and the solution pump so as to concentrate the red blood cells to a hematocrit of 60 to 98 percent.